What Is Claimed Is:

1. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding the Neutrokine-α polypeptide having the complete amino acid sequence in Figure 1 (SEQ ID NO:2);

(b) a nucleotide sequence encoding the Neutrokine-α polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC No. 97768 deposited on October 22, 1996;

(c) a nucleotide sequence encoding the Neutrokine-α polypeptide extracellular domain;

(d) a nucleotide sequence encoding the Neutrokine-α polypeptide transmembrane domain;

(e) a nucleotide sequence encoding the Neutrokine-α polypeptide intracellular domain;

(f) a nucleotide sequence encoding a soluble Neutrokine-α polypeptide comprising the extracellular and intracellular domains but lacking the transmembrane domain; and

(g) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), (e) or (f) above.

2. The nucleic acid molecule of claim 1 wherein said polynucleotide has the complete nucleotide sequence in Figure 1 (SEQ ID NO:1).

3. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence in Figure 1 (SEQ ID NO:1) encoding the Neutrokine-α polypeptide having the complete amino acid sequence in Figure 1 (SEQ ID NO:2).

4. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence encoding a soluble Neutrokine-α polypeptide comprising the extracellular domain shown in Figure 1 (SEQ ID NO:2).

5. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding a polypeptide having the amino acid sequence consisting of residues n-285 of SEQ ID NO:2, where n is an integer in the range of 2-190

(b) a nucleotide sequence encoding a polypeptide having the amino acid sequence consisting of residues 1-m of SEQ ID NO:2, where m is an integer in the range of 274-284;

(c) a nucleotide sequence encoding a polypeptide having the amino acid sequence consisting of residues n-m of SEQ ID NO:2, where n and m are integers as defined respectively in (a) and (b) above; and

(d) a nucleotide sequence encoding a polypeptide consisting of a portion of the complete Neutrokine-α amino acid sequence encoded by the cDNA clone contained in ATCC No. 97768 deposited on October 22, 1996 wherein said portion excludes from 1 to 190 amino acids from the amino terminus and from 1 to 11 amino acids from the C-terminus of said complete amino acid sequence.

6. The nucleic acid molecule of claim 1 wherein said polynucleotide has the complete nucleotide sequence of the cDNA clone contained in ATCC No. 97768 deposited on October 22, 1996.

7. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence encoding the Neutrokine-α polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC No. 97768 deposited on October 22, 1996.

8. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence encoding a soluble Neutrokine-α polypeptide comprising the extracellular domain encoded by the cDNA clone contained in ATCC No. 97768 deposited on October 22, 1996.

9. An isolated nucleic acid molecule comprising a polynucleotide which hybridizes under stringent hybridization conditions to a polynucleotide having a nucleotide sequence identical to a nucleotide sequence in (a), (b), (c), (d) , (e) or (f) of claim 1 wherein said polynucleotide which hybridizes does not hybridize under stringent hybridization conditions to a polynucleotide having a nucleotide sequence consisting of only A residues or of only T residues.

10. An isolated nucleic acid molecule comprising a polynucleotide which encodes the amino acid sequence of an epitope-bearing portion of a Neutrokine-α polypeptide having an amino acid sequence in (a), (b), (c), (d), (e) or (f) of claim 1.

11. The isolated nucleic acid molecule of claim 10, which encodes an epitope-bearing portion of a Neutrokine-α polypeptide selected from the group consisting of: a polypeptide comprising amino acid residues from about Phe-115 to about Leu-147 (SEQ ID NO:2); a polypeptide comprising amino acid residues from about Ile-150 to about Tyr-163 (SEQ ID NO:2); a polypeptide comprising amino acid residues from about Ser-171 to about Phe-194 (SEQ ID NO:2); a polypeptide comprising amino acid residues from about Glu-223 to about Tyr-247 (SEQ ID NO:2); and a polypeptide comprising amino acid residues from about Ser-271 to about Phe-278 (SEQ ID NO:2).

12. A method for making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim 1 into a vector.

13. A recombinant vector produced by the method of claim 12.

14. A method of making a recombinant host cell comprising introducing the recombinant vector of claim 13 into a host cell.

15. A recombinant host cell produced by the method of claim 14.

16. A recombinant method for producing a Neutrokine-α polypeptide, comprising culturing the recombinant host cell of claim 15 under conditions such that said polypeptide is expressed and recovering said polypeptide.

17. An isolated Neutrokine-α polypeptide comprising an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:

(a) the amino acid sequence of the Neutrokine-α polypeptide having the complete amino acid sequence in Figure 1 (SEQ ID NO:2);

(b) the amino acid sequence of the Neutrokine-α polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in the ATCC No. 97768 deposited on October 22, 1996;

(c) the amino acid sequence of the Neutrokine-α polypeptide extracellular domain;

(d) the amino acid sequence of the Neutrokine-α polypeptide transmembrane domain;

(e) the amino acid sequence of the Neutrokine-α polypeptide intracellular domain;

(f) the amino acid sequence of a soluble Neutrokine-α polypeptide comprising the domain; and

(g) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d), (e) or (f).

18. An isolated polypeptide of claim 17 comprising an epitope-bearing portion of the Neutrokine-α protein, wherein said portion is selected from the group consisting of: a polypeptide comprising amino acid residues from about Phe-115 to about Leu-147 (SEQ ID NO:2); a polypeptide comprising amino acid residues from about Ile-150 to about Tyr-163 (SEQ ID NO:2); a polypeptide comprising amino acid residues from about Ser-171 to about Phe-194 (SEQ ID NO:2); a polypeptide comprising amino acid residues from about Glu-223 to about Tyr-247 (SEQ ID NO:2); a polypeptide comprising amino acid residues from about Ser-271 to about Phe-278 (SEQ ID NO:2).

19. An isolated antibody that binds specifically to a Neutrokine-α polypeptide of claim 17.

20. A pharmaceutical composition comprising a polypeptide of claim 17 and a pharmaceutically acceptable carrier.

21. An isolated polynucleotide encoding a modified Neutrokine-α protein, wherein, except for at least one conservative amino acid substitution, said modified peptide has an amino acid sequence that is identical to a member selected from the group consisting of:

(a) amino acids 1 to 285 of SEQ ID NO:2;

(b) amino acids 2 to 285 of SEQ ID NO:2;

(c) amino acids 1 to 46 of SEQ ID NO:2;

(c) amino acids 47 to 72 of SEQ ID NO:2; and

(c) amino acids 73 to 286 of SEQ ID NO:2.

22. A modified Neutrokine-α polypeptide molecule, wherein, except for at least one conservative amino acid substitution, said modified peptide has an amino acid sequence that is identical to a member selected from the group consisting of:

(a) amino acids 1 to 285 of SEQ ID NO:2;

(b) amino acids 2 to 285 of SEQ ID NO:2;

(c) amino acids 1 to 46 of SEQ ID NO:2;

(c) amino acids 47 to 72 of SEQ ID NO:2; and

(c) amino acids 73 to 286 of SEQ ID NO:2.

23. An isolated nucleic acid molecule comprising a polynucleotide having a sequence at least 95% identical to a sequence selected selected from the group consisting of:

(a) the nucleotide sequence of SEQ ID NO:7;

(b) the nucleotide sequence of SEQ ID NO:8;

(c) the nucleotide sequence of SEQ ID NO:9;

(d) the nucleotide sequence of a portion of the sequence shown in Figure 1 (SEQ ID NO:1) wherein said portion comprises at least 30 contiguous nucleotides from nucleotide 1 to nucleotide 2442, excluding the sequence from nucleotide 1387 to 1421, the sequence from nucleotide 9 to 382, the sequence from nucleotide 1674 to 1996, the sequence

from nucleotide 1401 to 1784, the sequence from nucleotide 900 to 1237, and any fragments located within these sequences; and

(e) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c) or (d) above.